

## **MMS Alaska OCS Region**

# **Focus Sheet**

### **Minerals Management Service Oil-Spill Risk Analyses**

Oil spills may occur from activities associated with offshore oil production and transportation. The MMS conducts a formal assessment of oil spill risk for each proposed OCS lease sale. A multidisciplinary staff conducts each Oil-Spill Risk Analysis (OSRA) with expertise in physical oceanography, biology, computer programming, and operations research.

The objective of the OSRA is to estimate relative oil-spill risks associated with the production and transportation of oil and gas from the proposed lease sale. The MMS, Alaska OCS Region uses this analysis in the environmental impact statement (EIS) prepared for the lease sale. Analysts who prepare the EIS identify environmental resource areas at risk from oil spills. The OSRA considers spills greater than or equal to 1,000 barrels; smaller spills are addressed separately in the EIS.

The OSRA's for proposed OCS lease sales have three parts:

1. Estimation of oil-spill occurrence: The probability of oil-spill occurrence is estimated based on historical spill occurrence data and the estimated volume of oil resources assumed to be discovered, produced, and transported over the production life of the proposed lease-sale area.
2. Simulation of oil-spill pathways (trajectories): The trajectory portion of the OSRA model is a mathematical computer model that uses data on ocean currents and local wind conditions in the study area. The OSRA simulates pathways of hypothetical oil spills from potential spill sites to the coast and various environmental resource areas.
3. Estimation of spill occurrence and contact: The OSRA combines the results of the first two steps to estimate the overall oil-spill risk if there is oil production as a result of the lease sale.

A report on the OSRA results is prepared which provides a discussion of the assumptions and data used in the analysis. The report presents maps of the study area, transportation routes, environmental resource areas, and coastline, and tables of the OSRA results. These tables show the estimates of oil-spill occurrence, the likelihood of oil contacting environmental resource areas or coastline assuming an oil spill occurs at specific locations, and the likelihood of oil spills occurring and contacting environmental resource areas or coastline as the result of finding, producing and transporting oil from sale leases.

September 2001

#### **For Further information**

**Minerals Management Service Alaska OCS Region**  
**949 East 36<sup>th</sup> Avenue, Room 308, Anchorage, Alaska 99508-4363**  
**Public Affairs--907-271-6070; toll-free--1-800-764-2627**  
**Public Information--907-271-6621**  
**Website--[www.mms.gov/alaska](http://www.mms.gov/alaska); email--[akwebmaster@mms.gov](mailto:akwebmaster@mms.gov)**